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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,077	06/25/2003	Akihiko Otoguro	030757	1877
38834	7590	12/28/2004	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			NOVACEK, CHRISTY L	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/603,077

Applicant(s)

OTOGURO ET AL.

Examiner

Christy L. Novacek

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-23 and 25 is/are allowed.
- 6) ☒ Claim(s) 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This office action is in response to the amendment filed October 14, 2004.

#### ***Response to Amendment***

The limitations added to claims 1 and 22 are sufficient to overcome the rejection of claims 1, 7, 8, 12-14 and 22 under 35 U.S.C. 102(e) as being anticipated by Thakar et al. The limitations added to claims 1, 4, 22 and 23 are sufficient to overcome the rejection of claims 1-6, 22 and 23 under 35 U.S.C. 102(e) as being anticipated by Linliu et al. The limitations added to claims 1 and 22 are sufficient to overcome the rejection of claims 1, 2, 7 and 22 under 35 U.S.C. 102(b) as being anticipated by Tabara et al. and the rejection of claim 9 under 35 U.S.C. 103(a) as being unpatentable over Tabara et al. in view of Zhang et al. The limitations added to claims 4 and 23 are sufficient to overcome the rejection of claims 4-8, 12-14 and 23 under 35 U.S.C. 102(b) as being anticipated by Kim. The limitations added to claims 16 and 25 are sufficient to overcome the rejections of claims 16 and 25 under 35 U.S.C. 102(e) as being anticipated by Ding et al. The limitations added to claim 10 are sufficient to overcome the rejections of claims 10, 11 and 17-19 under 35 U.S.C. 103(a) as being unpatentable over Ding et al. in view of Zhang et al. Therefore, those rejections are withdrawn.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ding et al. (US 6,630,397, previously cited) in view of Zhang et al. (US 20040029395, previously cited).

Regarding claim 24, Ding discloses forming a laminated film for pattern formation on a substrate (10) wherein the laminated film includes an innermost layer (20), an inner layer (26) and a surface layer (32) (Fig. 3; col. 4, ln. 55 – col. 6, ln. 13). Ding discloses that the ARC layer is advantageously formed of an organic polymer but Ding does not teach any specific formula or method of forming the ARC layer (col. 2, ln. 3-5). Zhang teaches a method of forming a polysiloxane organic ARC layer for a substrate which has the beneficial property of leaving behind no residue or particulates which have the potential to cause defects on the substrate (Abstract; para. 41). The siloxanes disclosed by Zhang meet the limitations of claim 24. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the ARC formula of Zhang to form the ARC of Ding because Zhang's ARC formulation offers the benefit of not leaving any defect-causing residue or particulates on the substrate surface.

### *Response to Arguments*

Applicant's arguments filed October 14, 2004 have been fully considered but they are not persuasive.

Regarding the rejection of claim 24 as being unpatentable over Ding in view of Zhang, Applicant argues that Zhang allegedly fails to teach forming a polysiloxane “wherein  $R^1$  and  $R^2$  each express a hydrogen atom or light absorbent group and in one molecule of the polysiloxane compound, an entire portion thereof may be a light absorbent group, or a portion thereof may be a light absorbent group.” Zhang discloses that the materials disclosed in US Pat. No. 6,365,765 (Baldwin et al.) can be used to form the ARC layer. Baldwin discloses ARC layers made of polysiloxanes having light-absorbent groups including aromatic groups. Therefore, Zhang meets the claim limitations and the rejection is maintained.

*Allowable Subject Matter*

Claims 1-23 and 25 are allowed.

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christy L. Novacek whose telephone number is (571) 272-1839. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLN

December 23, 2004

  
AMIR ZARABIAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800